

**ABSTRACT**

A private mobile communication service system is operated and maintained using an internet protocol (IP) network. The private mobile communication service network has a private base station controller (pBSC) and a base station transceiver subsystem (BTS). The apparatus for operating and maintaining the private mobile communication service includes a wireless system manager (WSM), a hardware alarm collection unit, and a base station controller main processor (BMP). The WSM receives operation/maintenance information, processes the information, creates an operation/maintenance control signal, and transmits the control signal to the pBSC. The alarm collection unit is mounted on the pBSC to collect and output operation/maintenance information, to receive an operation/maintenance control signal, and to generate a reset signal. If operation/maintenance information is received, the BMP ascertains a link address and transmits the link address if it is the WSM. If a control signal is received, the BMP transmits the control signal to the hardware alarm connecting unit.